

Erosion and Deposition ▪ *Guided Reading and Study***The Force of Moving Water**

This section explains why moving water has energy and how it erodes and carries sediment. The section also identifies the factors that determine how much sediment a river can erode and carry.

Use Target Reading Skills

The first column in the chart lists key terms in this section. As you read the section, write a definition of the key term in your own words in the second column.

Key Term	Definition
Energy	
Potential energy	
Kinetic energy	
Abrasion	
Load	
Friction	
Turbulence	

Work and Energy

1. The ability to do work or cause change is _____.
2. Energy that is stored for later use is called _____ energy.
3. Is the following statement true or false? Kinetic energy is the energy an object has due to its motion. _____

How Water Erodes

4. In what ways can sediment enter a river?

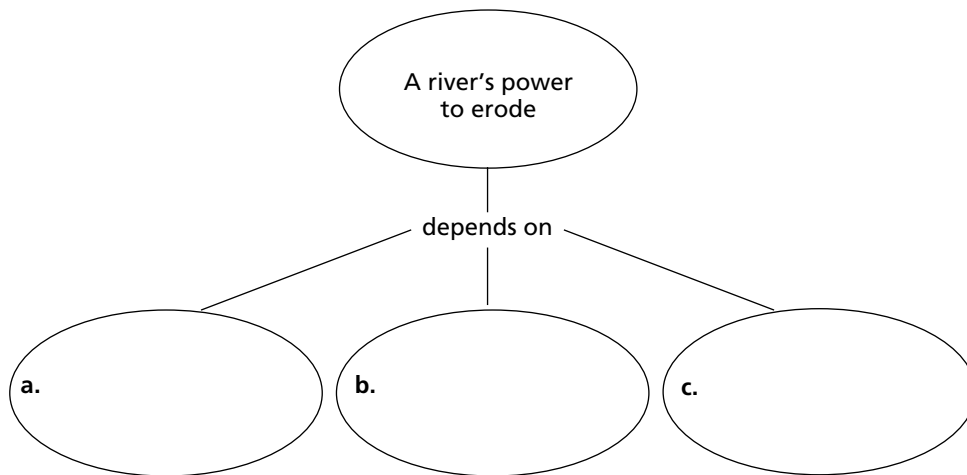
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5. The wearing away of rock by a grinding action is called _____.
6. Is the following sentence true or false? Sediment in a river abrades the streambed and is abraded by the streambed in return.

7. The amount of sediment that a river carries is its _____.
8. Circle the letter of each sentence that is true about a river's sediment.
 - a. Gravity and the force of the water cause sediment to move downstream.
 - b. Most small sediment moves by rolling and sliding along the bottom.
 - c. Most large sediment moves by bouncing.
 - d. Some sediment is dissolved by the water and carried in solution.

Erosion and Sediment Load

9. Complete the concept map.



- d. Write a sentence that describes a river with very little power to erode. Use the terms you wrote for a, b, and c.

10. Is the following sentence true or false? When a river slows down and deposits its sediment load, smaller particles of sediment are deposited first. _____

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The Force of Moving Water *(continued)*

11. Circle the letter of each factor that increases the speed of a river.

- a. Steep slope
- b. Low volume
- c. Deep streambed
- d. Boulders in streambed

12. Circle the letter of each factor that decreases the speed of a river.

- a. Gentle slope
- b. High volume
- c. Shallow streambed
- d. Boulders in streambed

Match the term with its definition.

Term	Definition
_____ 13. flow	a. Movement of water every which way instead of downstream
_____ 14. friction	b. Force that opposes the motion of one surface across another
_____ 15. turbulence	c. Volume of water that moves past a point on a river in a given time

16. Is the following sentence true or false? Where a river flows in a straight line, the water flows faster along the river's sides than near its center.

17. Label the drawing to show where the river erodes sediment and where it deposits sediment as it flows around the curve.

